Theater Battle Operations Net-Centric Environment

TBONE

Overview Briefing

Commander C2B
20 June 05
http://www.afc2isrc.af.mil/tbone/

Overview

- **Why TBONE?**
- **Vision**
- **What TBONE Is & Is Not**
- **Flight Plan**
- **Architecture**
- **Summary**

Why TBONE?

AFC2ISRC/CC Warfighter Perspective on the CAOC Weapons System (Feb 04)

- “Machine-to-machine processes, a smaller footprint, enhanced deployability and scalability”
- “Migrate to a web-enabled, PC-capable application environment”
- “Redesign databases and applications for network centric operations”
- “Utilize portal technologies to share information”
- “Reduce legacy equipment costs”
- “Break lock with proprietary systems & source”
- “An affordable solution today”

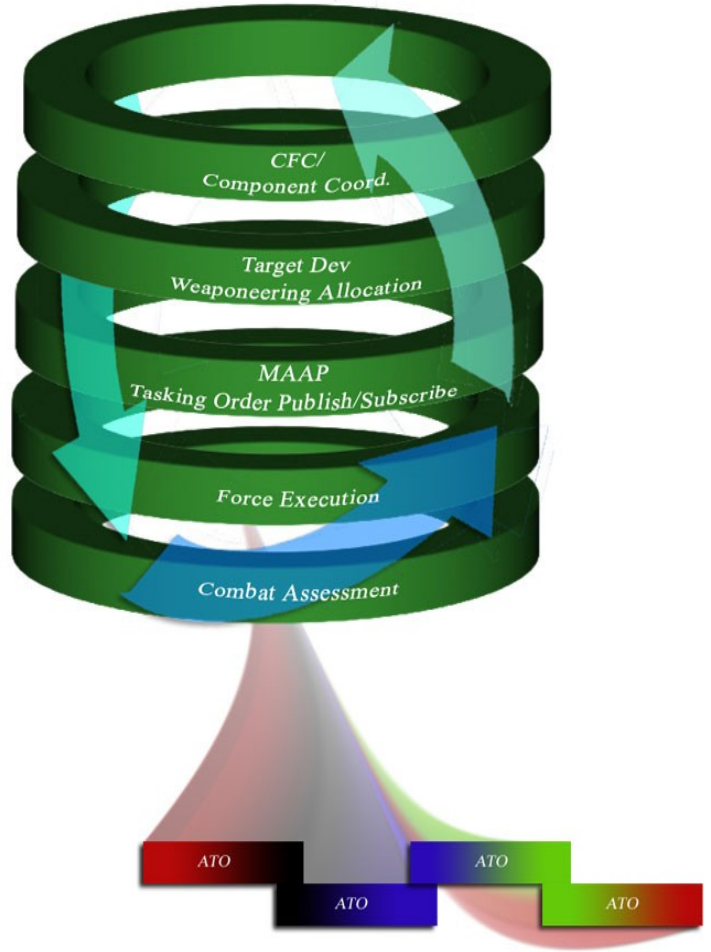
Collaborative approach that is dynamic, decentralized when advantageous, distributed when necessary, and rapidly deployable

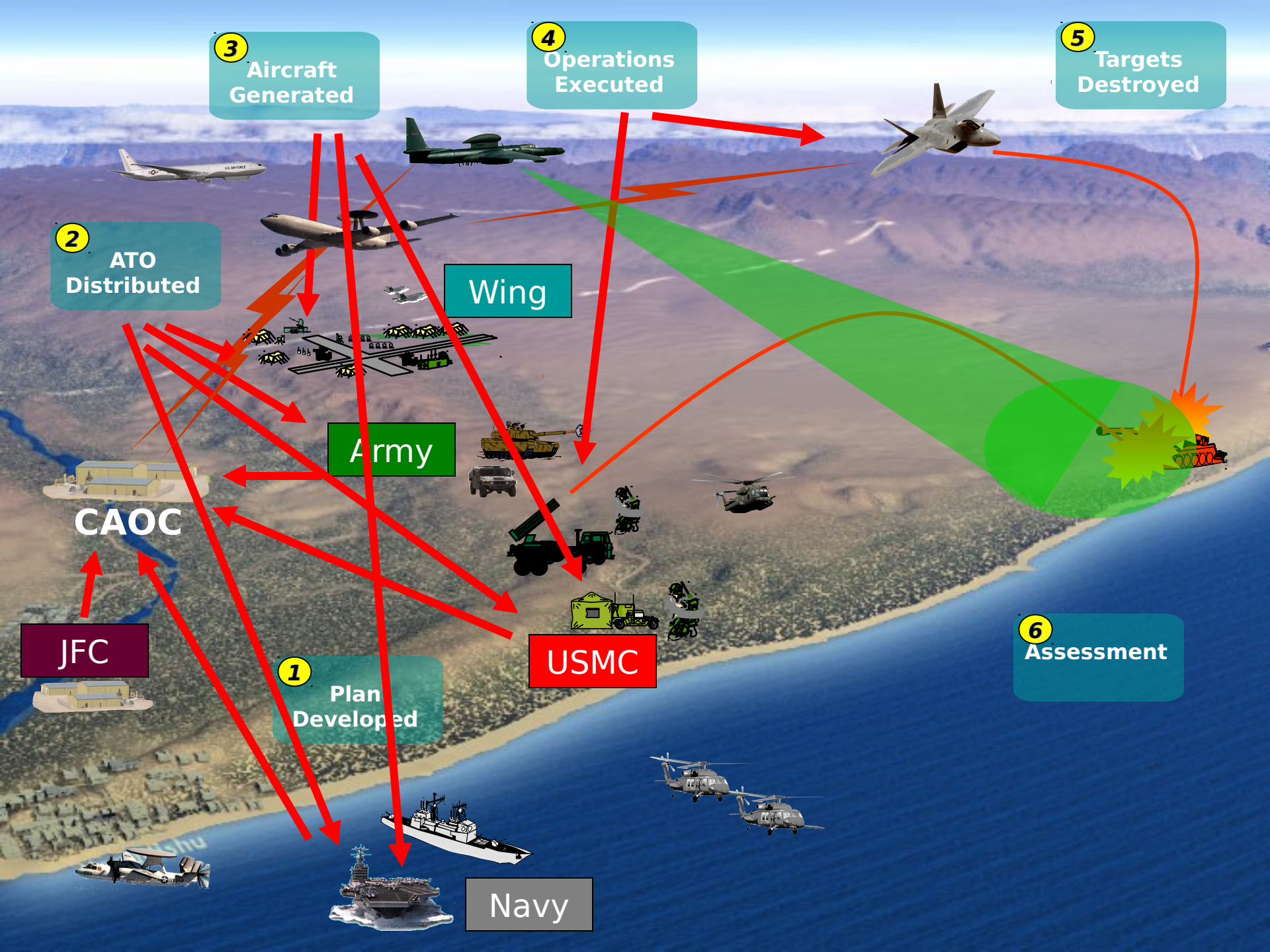
TBONE Vision

Create dynamic planning, execution and assessment capability that links requests, effects, operational guidance and supporting tasks within a temporal and geospatial unified database environment

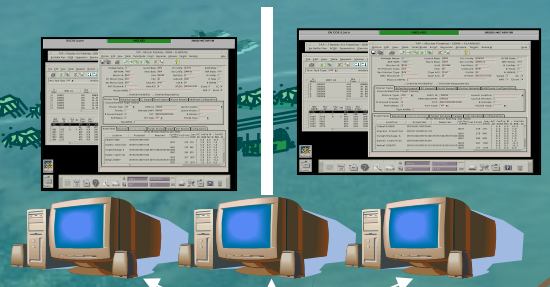
TBONE Will…

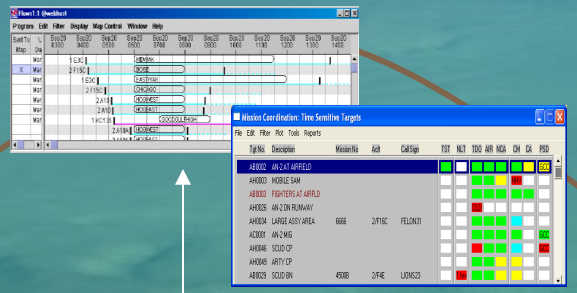
- **Support all AOC processes – strategy, targeting, planning, execution and assessment**
- **Provide entire air component a single relational, dynamic, and event-driven data environment**
- **Provide temporal, geospatial, and nodally linked visualizations**
- **Be scalable from laptop to enterprise environments**
- **Be intuitive, interactive, and provide common user look, feel and content for all force and unit level warfighters**




3
Aircraft Generated
4
Operations Executed
5
Targets Destroyed
2
ATO Distributed
Wing
Army
CAOC
JFC
USMC
1
Plan Developed
6
Assessment
Navy

AOC WS 10.1 / TBMCS 1.1.3





TAP Client

EMR Client

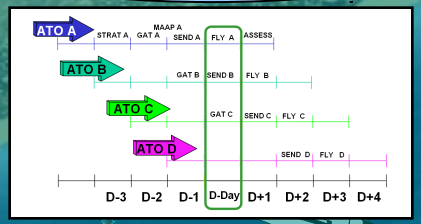
TAP Pvt

EMR Pvt

AODB

SERVICES

C2PC/WEEMC

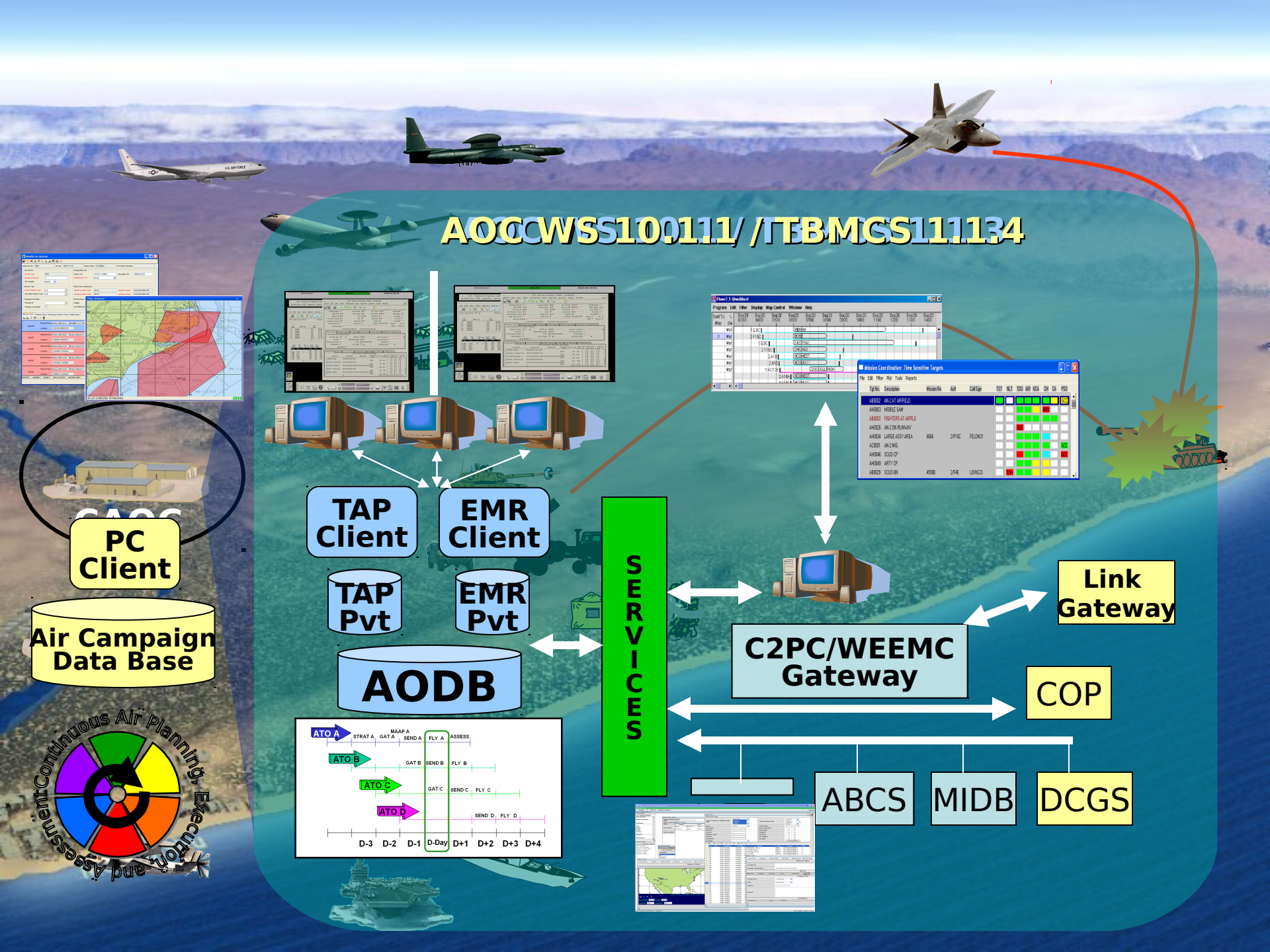


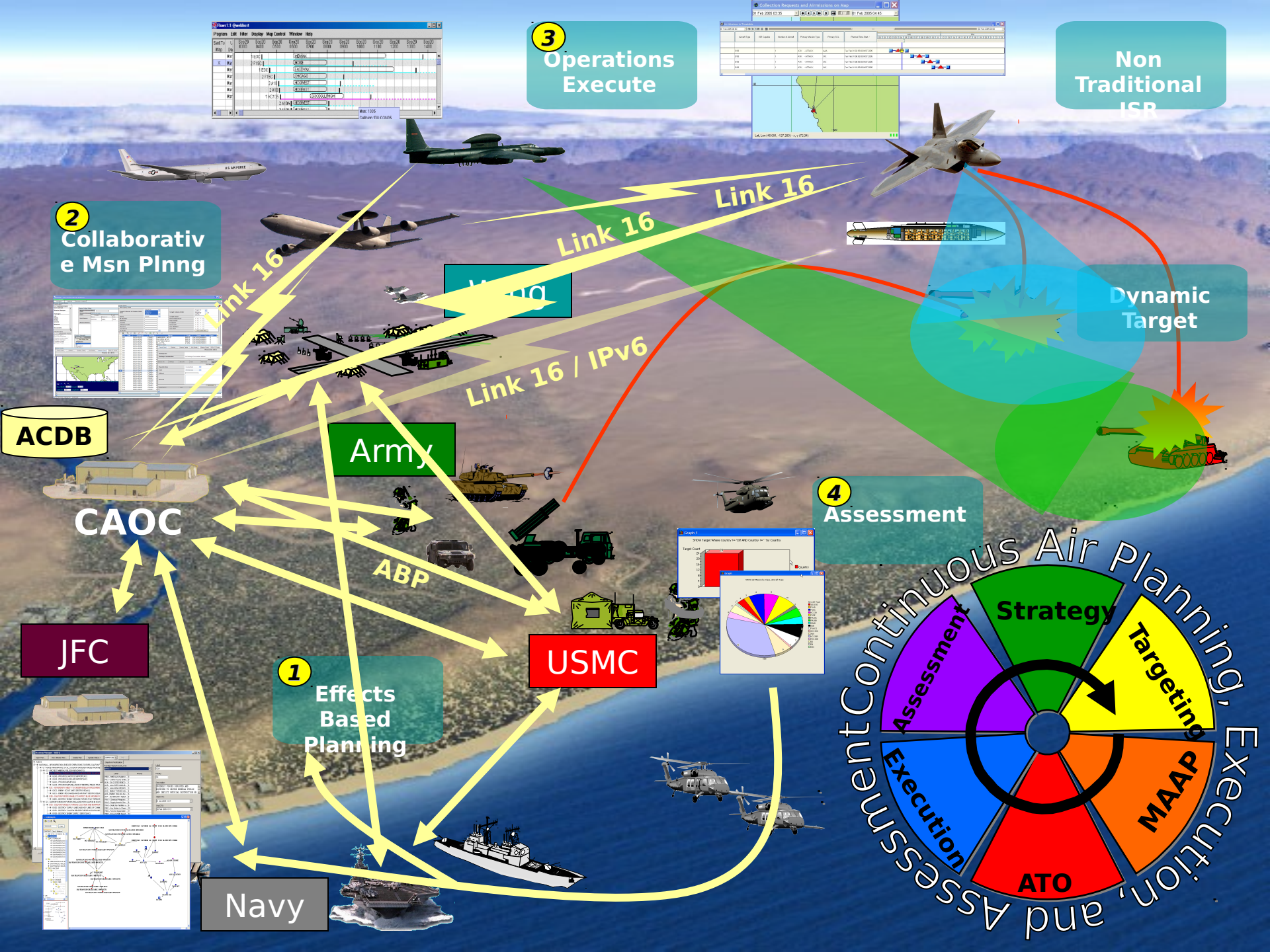
UL

ABCS

MIDB

Great progress – but still not where we need to be !

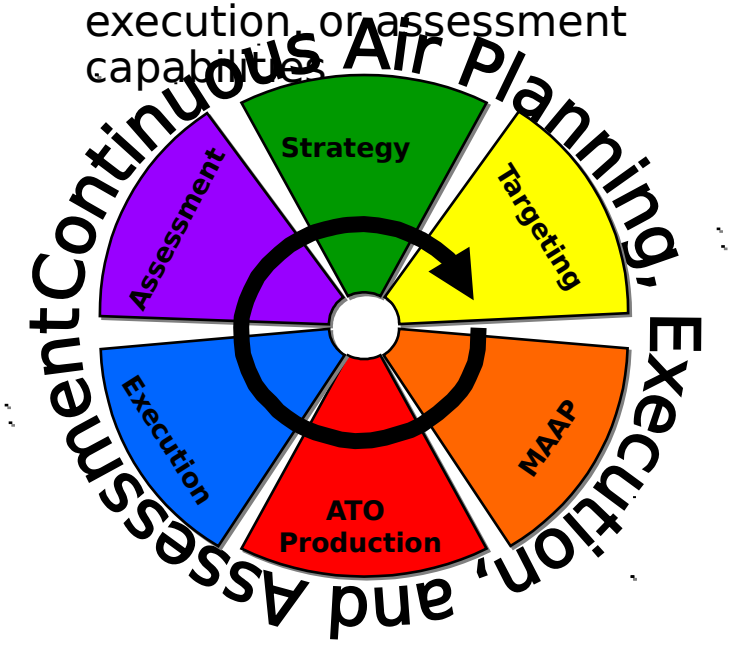

AOC WS10.1 / TBMCS 1.1.3.4
PC Client
Air Campaign Data Base
TAP Client
EMR Client
TAP Pvt
EMR Pvt
AODB
SERVICES
Link Gateway
C2PC/WEEMC Gateway
COP
ABCS
MIDB
DCGS
ATO A
ATO B
ATO C
ATO D
STRAT A
MAAP A
GAT A
SEND A
FLY A
ASSESS
GAT B
SEND B
FLY B
GAT C
SEND C
FLY C
SEND D
FLY D
D-3
D-2
D-1
D-Day
D+1
D+2
D+3
D+4
Continuous Air Planning, Execution and Assessment


3
Operations Execute
Non Traditional ISR
2
Collaborative Msn Plnng
Link 16
Link 16
Link 16
Link 16 / IPv6
Dynamic Target
ACDB
Army
CAOC
ABP
4
Assessment
JFC
USMC
1
Effects Based Planning
Navy
Continuous Air Planning, Execution, and Assessment
Strategy
Targeting
MAAP
ATO
Execution
Assessment

What is TBONE (pre-LOE5)?

- **TBONE is:**
  - A C2 Battlelab Billy Mitchell Initiative
  - Replacing TAP/EMR functionality with advanced collaborative planning
  - Replacing Air Operations Database (AODB) with XML-enabled DB and web architecture
  - Providing current AOC WS-equivalent strategy, airspace management, execution and assessment capabilities
  - Enabling a new “request-driven”, effects-based process
  - Capable of working with our “as-is” USMTF-based process and XML data transfer
  - Consistent with architecture, standards, and tools used in DCGS
  - Providing web services for 3rd-party application participation
  - A series of LOEs culminating in JEFX 2006
  - The Core of TBMCS 1.1.4

- **TBONE is not:**
  - The entire AOC
  - Everything you need to run an AOC
  - Proprietary
  - Developing advanced strategy, airspace management, execution, or assessment capabilities



What is TBONE (post-LOE5)?

- **TBONE is:**
  - **The Core of TBMCS 1.1.4 & AOC 10.1.x**
  - **Prime Contractor = ISS**
    - **Development Activities**
    - **Maintenance Activities**
    - **Service Packs associated with fixes**
    - **Analysis**
    - **Help Desk**
    - **Fieldings**
    - **Documentation**
  - **Sub-Contractor to LM = ISS**
    - **Integration Activities**
    - **DT/OT Support**
  - **GFE SW (GOTS)**
    - **TBONE Executable Code & Client/Server Installers**
    - **Users Manuals**
    - **Installation Manuals**
    - **Administration Manuals**
    - **Training Materials**
    - **Software Developer's Kit (SDK)**
    - **Security Documentation**
    - **Load SUMs**
  - **Delivered to ESC/LM on 30 Sept 05**

- **TBONE is not:**
  - **An Active C2B Initiative**
  - **All of TBMCS and/or AOC**
  - **Proprietary**
  - **Still-evolving additional functionalities**

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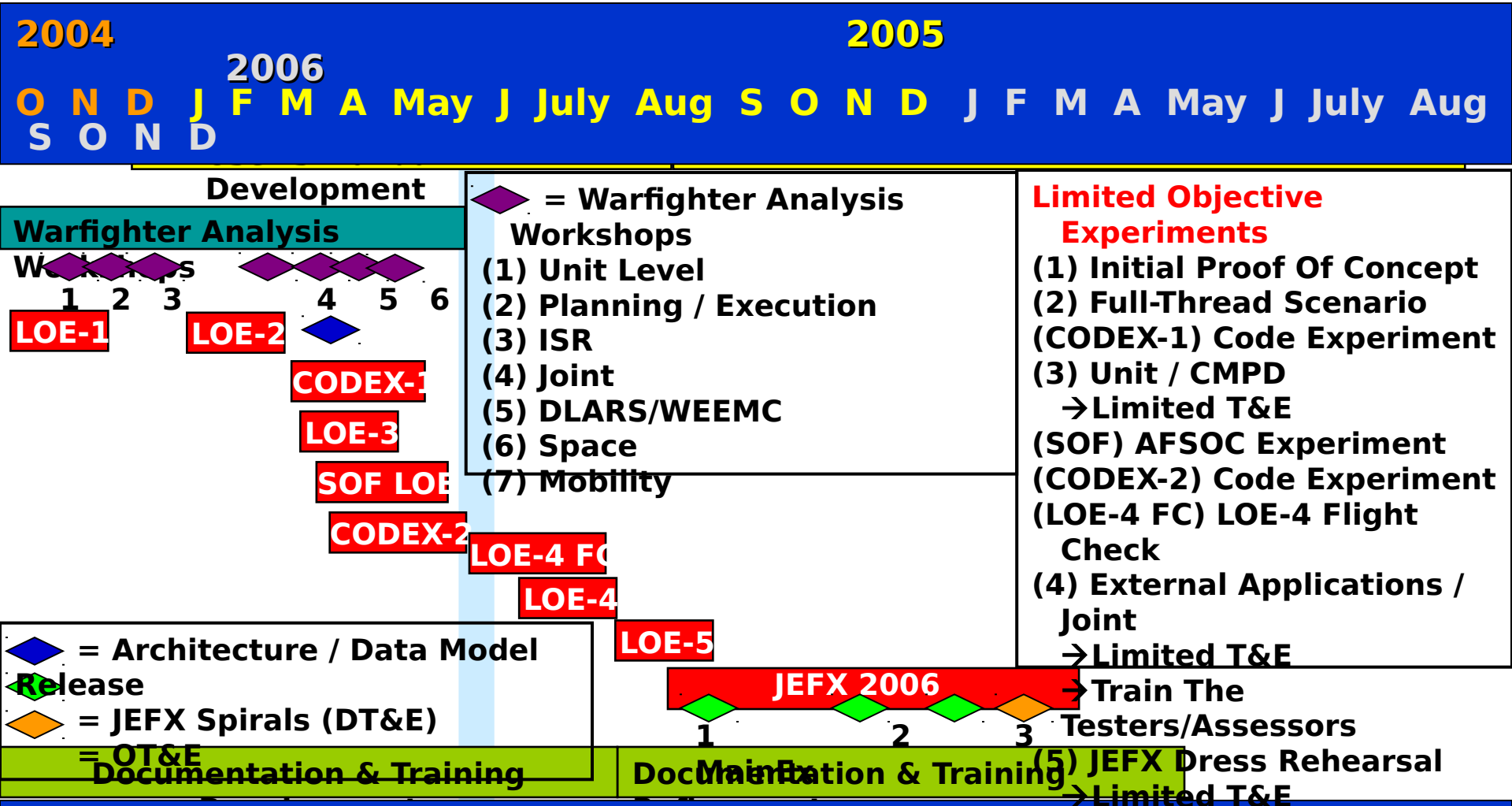
TBONE Flight Plan CY04-06



TBONE
JEFX 2006 (DT/OT)

Strategy	GAT/TAT	MAAP	ATO Prod	Unit	Execution
TBONE	TBONE	TBONE	TBONE	TBONE	TBONE	TBONE
IWPC	JTT	JWIS	JWIS	PEX	WEEMC	JTT
				AMT	DLARS	IWPC
				PFPS	TACP-CASS	
				C2MM		
				SOFTools		

Applications

Application Server — WebLogic 9.0

Information / Web Service — WebLogic 9.0

Data Engine — Sybase 11; Oracle 10g

Data Bases — MIDB; TBONE DB; Track DB

Infrastructure (Hardware, Operating System, etc) — Windows 2003

GCCS-I3

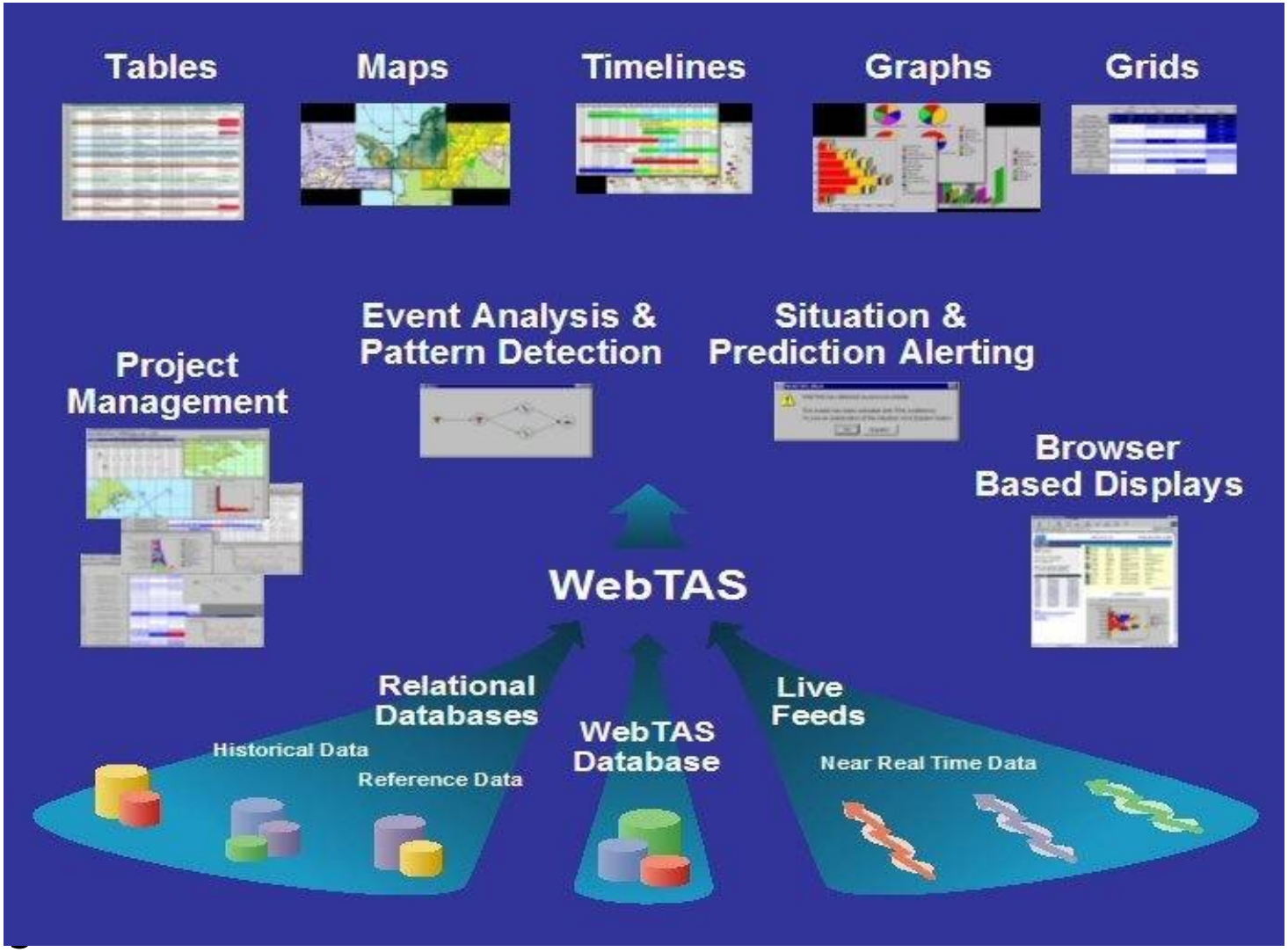
GCCS-J & T3DCOP

CoT

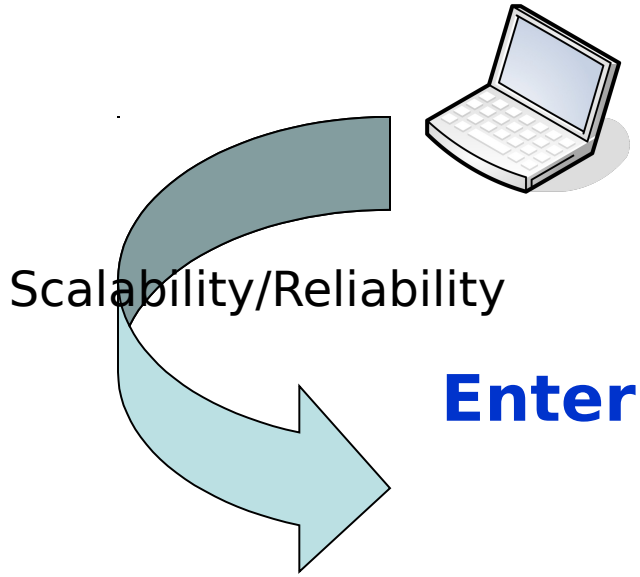
Current Programs

Baseline Element of TBONE

WebTAS Architecture



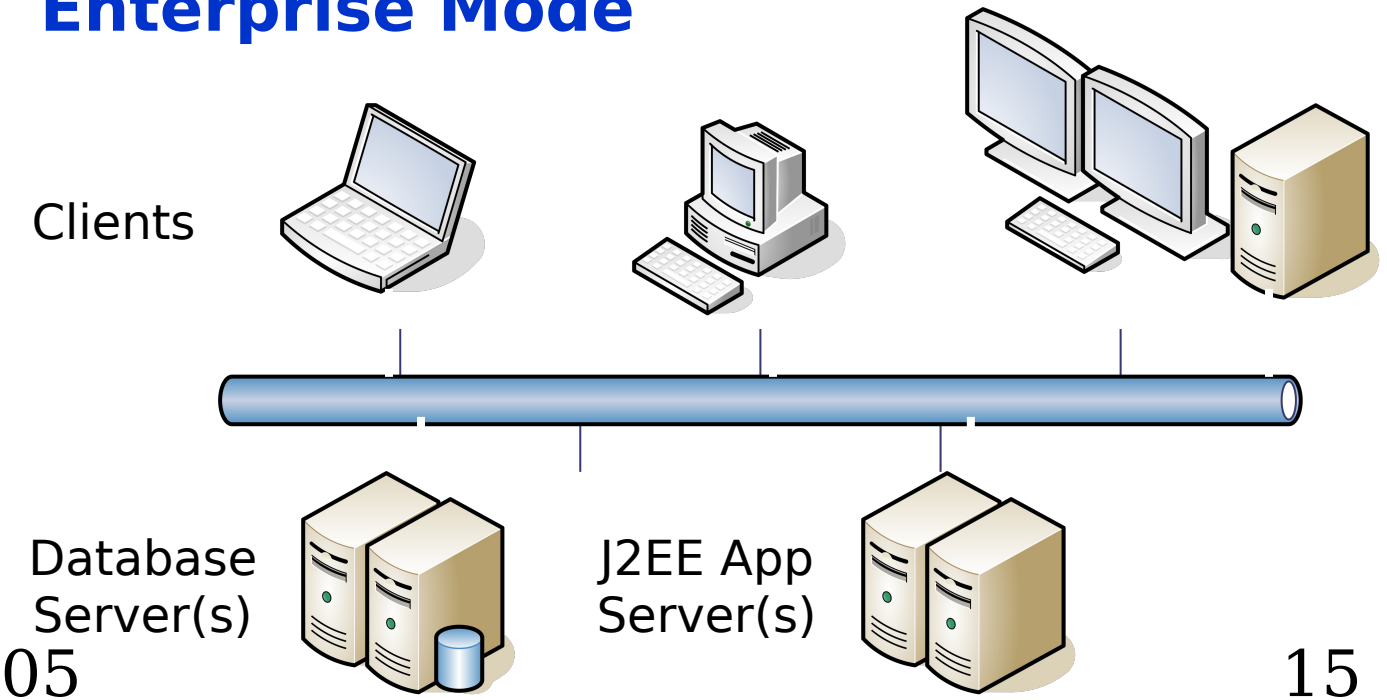
TBONE Physical Architecture



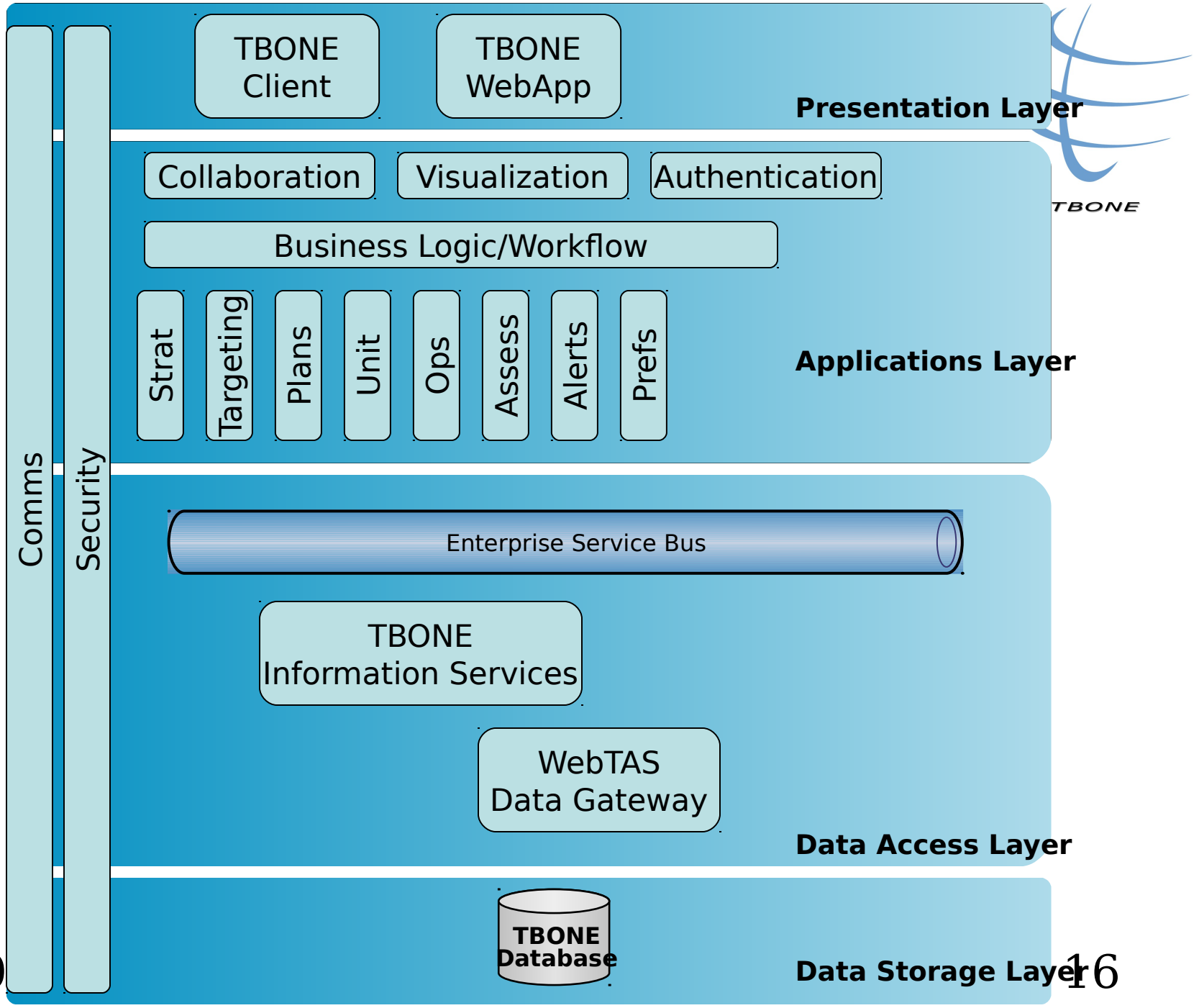
Single Laptop Mode

Scalability/Reliability

Enterprise Mode



TBONE Logical Architecture



TBONE Summary

- **Five Tenets**
  - PC based…Easier to use with wizard technology
  - One common data model…Consistent design across all phases
  - Net-centric from the ground-up…Future operating environment
  - Enhances EBO…Closely coupled with ABP objectives
  - Dynamic environment…The ATO & ACO are products, not vers
- **n TBO**

Working with Joint and Multi-Service Partners to Enhance Air Component Support of the Joint Force